



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,434	08/23/2006	Yoshio Katsuda	128737	8694
25944	7590	11/23/2009	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850			JOYNER, KEVIN	
ART UNIT	PAPER NUMBER			
	1797			
MAIL DATE	DELIVERY MODE			
11/23/2009	PAPER			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,434	Applicant(s) KATSUDA ET AL.
	Examiner KEVIN C. JOYNER	Art Unit 1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 06 August 2009.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1 and 3-13 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1 and 3-13 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor or carrying out his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. More specifically, the specification does not positively provide support that the device does not comprise a fan. Appropriate action is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harms et al. (U.S. Patent No. 6,348,086) in view of Soane et al. (U.S. Publication No. 2004/0250683).

Harms discloses an air filtering and chemical volatilization device comprising:
A chemical retainer made of fibers (Figure 1; column 7, lines 1-18); and
A rotary drive device, without a fan, wherein the rotary drive device rotates the chemical retainer about the chemical retainer's axis (column 5, lines 37-50), and

The chemical retainer comprising;
Chemical retaining fibers in the form of a regular mesh in two dimensional directions on both an upper and a lower side of the chemical retainer, the regular mesh having individual mesh units (column 5, lines 3-20); and

A plurality of supportive chemical retaining fibers arranged between the chemical retaining fibers, which are located on the upper and lower sides of the chemical retainer, and connect the chemical retaining fibers on both the upper and lower sides at a predetermined interval as a result of having bending elasticity (column 4, lines 43-68). More specifically, the mesh of Harms is fully capable of retaining a fluid and volatilizing said fluid upon the application of airflow.

Although Harms, does not appear to disclose that the fibers are twisted threads, it is extremely well known that woven fiber meshes, such as the mesh disclosed by Harms is produced by twisted threads. Nonetheless, Soane discloses an air filtering and chemical volatilization device comprising a chemical retainer made of fibers including chemical retaining fibers and supportive chemical retaining fibers (paragraphs

25 and 26; Figures 3, 8 and 10). The reference continues to disclose that the fibers create a filter mesh material that support a neutralizing component, wherein said mesh is produced by an assortment of twisted threads (Figures 5 and 7; paragraphs 39-41) in order to create a tortuous flow path for contaminated fluids and thus increase the contact time for said fluids with said fibers. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Harms to include twisted threaded fibers in the chemical retainer in order to create a tortuous flow path for contaminated fluids and thus increase the contact time for said fluids with said fibers as exemplified by Soane.

Concerning claim 3, Harms also discloses that the supportive chemical retaining fibers from a columnar structure as a result of being arranged roughly parallel in the vertical direction (Figures 1a, 1b and 6a). With regard to claim 10, Harms also discloses small gap chemical retaining fibers, which have a smaller gap than the chemical retaining fibers, and which are connected to the chemical retaining fibers on both side, are arranged between the chemical retaining fibers on the upper and lower sides (column 4, lines 35-65).

6. Claims 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harms et al. (U.S. Patent No. 6,348,086) in view of Soane et al. (U.S. Publication No. 2004/0250683) as applied to claim 1 above, and further in view of D'Amico et al. (U.S. Publication No. 2006/0110297).

Concerning claims 4-9, Harms is relied upon as set forth above. While Harms discloses that the supportive chemical retaining fibers form a columnar structure by being arranged roughly in parallel in the vertical direction (Figures 1a and 6a), Harms does not appear to disclose that the supportive chemical retaining fibers form a diagonal structure as a result of being arranged to intersect on an angle in the vertical direction, wherein the diagonal structure is formed so as to connect apices together located on the same side, and opposite sides, based on all four directions in the mesh unit corresponding to upper and lower sides. D'Amico discloses a chemical volatilization device comprising a chemical retainer (10) made of fibers comprising chemical retaining fibers (as shown in Figure 12) and supportive chemical retaining fibers (13 & 82) located on the upper and lower sides of the chemical retainer (paragraphs 56 and 65-67). The reference continues to disclose that the supportive chemical retaining fibers form a diagonal structure as a result of being arranged to intersect on an angle in the vertical direction, wherein the diagonal structure is formed so as to connect apices together located on the same side, and opposite sides, based on all four directions in the mesh unit corresponding to upper and lower sides (Figure 12) in order to create a larger surface area for said fibers with a contaminated fluid (paragraphs 19 and 20). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the chemical retainer of Harms to utilize the supportive chemical retaining fibers in a diagonal structured direction as a result of being arranged to intersect on an angle in the vertical direction, wherein the diagonal structure is formed so as to connect apices together located on the same side, and opposite sides, based on all four

directions in the mesh unit corresponding to upper and lower sides in order to maximize the surface area for said fibers with a contaminated fluid to ultimately reduce contaminants in the fluid as exemplified by D'Amico.

7. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harms et al. (U.S. Patent No. 6,348,086) in view of Soane et al. (U.S. Publication No. 2004/0250683).

Harms is relied upon as set forth above. Harms does not appear to disclose a plurality of chemical retainers consisting of chemical-retaining fibers arranged on the upper and lower sides and the supportive chemical retaining fibers arranged therebetween are overlapped. However, The Manual of Patent Examining Procedures discloses that in *In re Harza*, 274, F.2d 669, 124 USPQ 378 (CCPA 1960), a mere duplication of parts for a multiplied effect has no patentable significance unless a new and unexpected result is produced (See MPEP 2144.04). As such the claimed plurality of chemical retainers is not patentably distinct from Harms.

Furthermore, Claim 12 further requires that the distance between the chemical retaining mesh fibers on both sides is 1.0 to 10.0 mm. It would have been well within the purview of one of ordinary skill in the art to optimize the distance of the chemical-retaining mesh fibers in order to maximize the efficiency and effectiveness of the purification process. Only the expected results would be attained.

Art Unit: 1797

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harms et al. (U.S. Patent No. 6,348,086) in view of Soane et al. (U.S. Publication No. 2004/0250683) as applied to claim 1 above, and further in view of Scoggins (U.S. Patent No. 4,750,863).

Harms is relied upon as set forth above. Harms does not appear to disclose that the filter arrangement is provided with a protective casing housing the chemical retainer, which surrounds the outer circumference of the retainer with a plurality of rings and a bearing located in the center that is capable of engaging with a rotating shaft. Scoggins discloses a filter arrangement (Figure 1) with a chemical retainer (6) that is utilized with a rotary device in order to purify a fluid and dispel said fluid with a fan (column 1, lines 5-45). The reference continues to disclose that the arrangement is provided with a protective casing housing the chemical retainer, which surrounds the outer circumference of the retainer with a plurality of rings and a bearing located in the center that is capable of engaging with a rotating shaft (Figures 1, 2 and 4). Such a configuration is utilized in order to employ the filter arrangement with a ceiling fan (column 1, lines 20-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a protective casing housing the chemical retainer, which surrounds the outer circumference of the retainer with a plurality of rings and a bearing located in the center that is capable of engaging with a rotating shaft in the device of Harms in order to employ said arrangement with a ceiling fan as exemplified by Scoggins.

Response to Arguments

9. Applicant's arguments with respect to claims 1 and 3-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN C. JOYNER whose telephone number is (571)272-2709. The examiner can normally be reached on M-F 8:00-4:30.

Art Unit: 1797

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCJ

/Sean E Conley/
Primary Examiner, Art Unit 1797